A low-cost versatile system for continuous real-time respiratory activity measurement as a tool in environmental research

Tamara Djerdj¹, Vesna Peršić¹, Davorka K. Hackenberger¹, Domagoj K. Hackenberger¹, Branimir K. Hackenberger^{1,*}

¹ Josip Juraj Strossmayer University of Osijek, Department of Biology, Cara Hadrijana 8/A, HR-31000 Osijek, Croatia

* To whom correspondence should be addressed at Josip Juraj Strossmayer University of Osijek, Department of Biology, Cara Hadrijana 8/A, 31000 Osijek, Croatia

Fax: +385 31 399-939. Phone: +385 31 399-910. E-mail: hackenberger@biologija.unios.hr

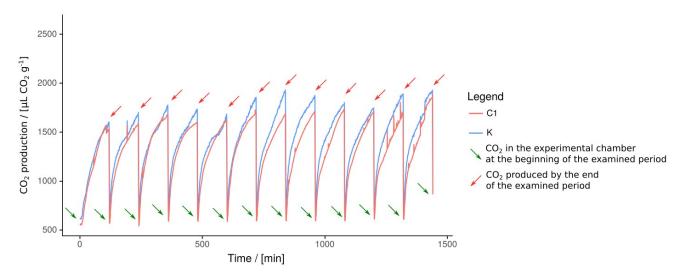


Figure 1: Example of respiratory activity curves of earthworms involved in an artificial soil test. Important features of CO₂ dynamics curves are noted with arrows. Red arrows denote pump activation at the end of each two-hour CO₂-generation segment.

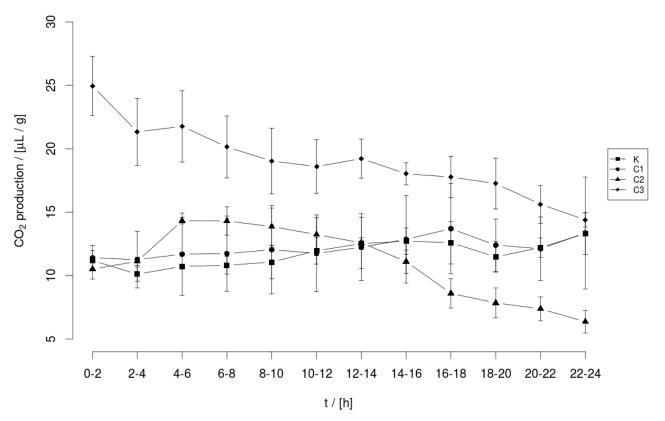


Figure 2: Respiratory activity of earthworms exposed to 0 (K), 0.5125 mg kg⁻¹ (C1), 2.56 mg kg⁻¹ (C2) and 7.68 mg kg⁻¹ (C3) of chlorpyrifos in artificial soil. Plotted are mean values +/- standard deviation of calculated respiratory activities of control and treatment groups.